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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/996,197

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Srikanth Gummadi

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05/31/2006

TEXAS INSTRUMENTS INCORPORATED

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EXAMINER

CORRIELUS, JEAN B

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/996,197	Applicant(s) GUMMADI ET AL.	
	Examiner Jean B Corrielus	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-35 is/are allowed.
- 6) ☒ Claim(s) 25-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. The objection to claims 32-35 has been withdrawn in view of the last amendment to the claims.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 25-26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 8 of copending Application No. 10/085,562 in view of applicant's admitted prior art fig. 6.

As per 25, the co-pending application claim 1 discloses every feature of the claimed invention, but does not explicitly teach the further limitations "the correlating step comprising summing up a correlation result resulting from each correlation of the

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digital sample with the plurality of previously received digital samples". However, applicant's admitted prior art teaches the further limitations of "the correlating step comprising summing up a correlation result resulting from each correlation of the digital sample with the plurality of previously received digital samples" see 620. Given that fact, It would have been obvious to one skill in the art to incorporate such a teaching in claim of the copending application so as to output proper correlation signal.

As per claim 26, the copending application claim 8 teaches the feature of the claim.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art figs. 1-6 in view of Radi US Patent No. 6,594,327.

As per claim 25, applicant background of the invention and admitted prior art figs. 1-6 disclose a method and apparatus (fig. 6) comprising receiving the stream of digital samples fig. 2 each sample comprises a plurality of values see fig. 6; correlating a digital sample value with a plurality of previously received digital sample values 610; calculating a correlation value based on the correlation 620; comparing the correlation

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value against a threshold, and determining the presence of the boundary based on the comparison see page 2, line 29-page 3, line 2; wherein the correlating step comprising summing up a correlation result resulting from each correlation of the digital sample with the plurality of previously received digital samples see 620. However, the admitted prior art figure 6 does not explicitly teach "a single digital value" is correlated with a plurality of received digital sample values. In the same field of endeavor, Radi teaches the step of correlating in correlator 504 "a single digital value" output by 512 a plurality of received digital sample values output of buffer 502. See col. 9, lines 61-65. Given that fact, it would have been obvious to one skill in the art to modify applicant's admitted prior art figure 6 in the manner taught by Radi so as to improve system configuration and/or performance.

As per claim 26, the corresponding values in each one of the plurality of previously received digital samples are selected based on their position in the previously received digital samples see fig. 6.

As per claim 27, it would have been obvious to one skill in the art to configure the stream of digital samples in such a way that a position of the first value in the first sample is same as positions of corresponding values in each one of the plurality of previously received digital samples in order to improved signal detection.

As per claim 28, applicant's admitted prior art further teaches that the correlating step comprises: comparing a first digital sample value with the plurality of received digital sample values; generating a one value each time the digital sample value matches with one of the digital sample values in the plurality; and generating a zero

value each time the digital sample value does not match with one of the digital sample values in the plurality see page 14, lines 10-13.

As per claim 29, the threshold is predetermined. See page 2, line 21.

As per claim 30, it would have been obvious to one skill in the art to use an adaptive threshold that changes based on network conditions to improve system stability.

As per claim 31, the boundary detection is performed after a specified number of sample values is received see page 3, lines 6-9.

Allowable Subject Matter

6. Claims 32-35 are allowed.

Response to Arguments

7. Applicant's arguments, see page 7 of the comment, filed on 4/21/06, have been fully considered and are not persuasive. It is alleged that the admitted prior art fig. 6 only teaches comparing a current sample with a previous sample of each of a plurality of received digital samples as oppose to comparing each sample with one of the plurality of previous samples. However, it is noted that the combination of fig. 6 of applicant's admitted prior art and Radi clearly teaches applicant's claimed subject matter. As set forth in the rejection above, Applicant's admitted prior art fig. 6 teaches comparing a current sample with a previous sample of each of a plurality of received digital samples it does not teach however using a "single value" to make the

comparison. Radi compensates for the deficiencies noted in applicant's admitted prior art by comparing "a single value" with each of a plurality of samples see clearly shows a value in a digital sample is correlated with a corresponding value in a plurality digital samples previously received. See correlator 504, element 512, buffer 502 and col. 9, lines 61-65.

Applicant further alleges that claim 25 as amended is distinct from claim 1 of the copending application as claim 25 recites "determining the presence of the boundary" which is not part of claim 1. However it is noted that such limitation is positively recited in claim 25 see for instance last two lines.

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jean B Corrielus
Primary Examiner
Art Unit 2611

5-27-06